

REMARKS

This is in response to the Final Office Action of September 14, 2010 and the Advisory Action of December 3, 2010. With this amendment, claims 1 and 22 are amended, and all pending claims 1-11, 23-20, 22 and 24-25 are presented for reconsideration and favorable action.

Amendments

From the detailed comments of the Examiner provided along with the Advisory Action, it appear that the objections of the Examiner are primarily still based on the claim language, as amended in response to the Office Action of May 11, 2010.

In amend claims 1 and 22, the formulation "in a manner (...) that enables the spindle shaft to advance and to actuate a brake cable" has been amended to read now "in a manner (...) that enables the spindle shaft to undergo advancing movement relative to the remotely operated drive and to thereby actuate a brake cable". Through this amendment, it should be entirely clear that the advancing motion referred to in these claims is that of the spindle shaft, and that this motion is performed with respect to the remotely-operated drive of the setting unit. Further, it should be clear from these claims that the actuation of the brake cable is accomplished by means of the advancing movement of the spindle shaft. This amendment is based on the following parts of the original disclosure (we refer to paragraph and line numbers of the application as published on October 18, 2007):

paragraph [0027] describes applying a motor vehicle parking brake by actuating a brake cable (paragraph [0027], lines 1 to 3), by means of the inventive setting device. The paragraph further describes that advancing movement is exerted on the spindle shaft 3

(paragraph [0027], line 8) and that "the brake cable applies the brake 4 through the movement of the spindle shaft 3" (paragraph [0027], lines 12 and 13).

Figures 1, 3 and 5 show different views and operational states of the same embodiment of the inventive device (see paragraphs [0012], [0014] and [0015]). The component denoted by the reference sign, 8 is an electric motor of a setting unit 10, the electric motor being an example of a

remotely-operated drive (paragraph [0022], lines 6 and 7 as well as paragraph [0007], lines 1 and 2). Figures 1, 3 and 5, for example, clearly show that the advancing movement of the spindle shaft 3 is performed with respect to the remotely-operated drive, the spindle shaft 3 moving back and forth within the housing 1, the electric motor 8 of the shown embodiment being attached to the housing 1 (Figure 1).

Further, in amended claims 1 and 22, the torque-transmitting connection in line 7 of currently pending claims 1 and 22, respectively, is now explained in greater detail in order to overcome the Examiner's objection in view of document Arnold et al. (US 5,180,038). Specifically, claims 1 and 22 as enclosed now specify that the connection enables the transmission of a torque for actuating the brake cable from the remotely-operated drive to the hollow shaft. The remaining section of the corresponding paragraph of these claims has been slightly adapted in order to point out even more clearly that it is this connection which enables the hollow shaft to axially move. Through this amendment, it is clear in which manner the connection, referred to is capable of transmitting torque. Support for this amendment is found in the original disclosure as follows:

In paragraph [0027], lines 3 to 7, the transmission of torque from the electric motor 8 (so, from the remotely-operated drive) to the transmission drive wheel 2.1 and thus to the hollow shaft 2 is described. Further, it is described in lines 8 to 12 that the hollow shaft functions as a spindle nut and that by the meshing of the threads of the hollow shaft and the spindle shaft, the axial advancing movement is exerted on the spindle shaft. Actuation of the brake cable takes place through this advancing movement, as explained above.

In addition, the originally filed figures, in particular Figure 1, show a torque transmitting connection (through the meshing of the gears 8.2, 11 and 2.1) which enables to transmit the torque necessary to rotate the hollow shaft and to thereby move the spindle shaft for actuating the brake cable 4.

Additionally, in line 14 of new claim 1, the wording of the claim has been improved by inserting the word "the".

Concerning novelty and non-obviousness of the subject-matters of amended claims 1 and 22 as enclosed in view of prior art document Arnold et al. (US 5,180,038), Applicants also refers to the Response After Final electronically filed November 15, 2010.

Additionally, Applicant would like to point out the following aspects in support of novelty and non-obviousness with regard to the proposed new independent claims:

Novelty

Amended claims 1 and 22 set forth that the connection of the hollow shaft and the spindle shaft enables advancing movement of the spindle shaft relative to the remotely-operated drive. As has been pointed out previously, the drive screw 36 shown in document Arnold et al. is maintained against longitudinal movement by means of tapered roller bearings, and so the drive screw 36 of Arnold et al. will not be able to undergo advancing movement. See, in particular, column 3, lines 42 to 44 of this document. Both the intermediate wall 3 and the motor 50 of Arnold et al. are stationary within the housing, the direct current motor being mounted within the housing chamber (column 3, lines 65 and 66). Arnold et al. does not disclose advancing movement of the spindle shaft relative to a remotely-operated drive.

Moreover, according to new claims 1 and 22, there is provided a connection which has the following features:

- it enables the transmission of a torque for actuating the brake cable from the remotely-operated drive to the hollow shaft, and
- it enables the hollow shaft to move axially relative to the remotely-operated drive.

The Examiner has argued that the threaded connection between nut 42 and the movable member 8 was stiff enough to transmit torque, and was located between the electric motor 50 and portions of the movable member 8 shown in Arnold et al. However, the connection of nut 42 and movable member 8 alone does not allow the transmission of torque for actuating the brake cable from the electric motor 50 shown in prior art document Arnold et al. to the movable member 8.

It is emphasized again that for the device of Arnold et al. to work, movable member 8 must necessarily be prevented from rotation relative to the housing in the case one speculates

that there was some torque imparted onto movable member 8 by the drive screw 36 during operation. A person skilled in the art would, upon consideration of document Arnold et al., immediately recognize this need. The device of Arnold et al. then lacks the feature stated in claims 1 and 22 of the hollow shaft being enabled to rotate.

It can thus be appreciated that document Arnold et al. does not disclose a combination of hollow shaft enabled to rotate and a connection transmitting torque for actuating the brake cable from the remotely-operated drive to the hollow shaft.

The subject-matters of amended claims 1 and 22 are therefore novel over Arnold et al.

Non-obviousness

The nature of the technical problem a person having ordinary skill in the art had to solve, and the reasons for which the person skilled in the art would not arrive at the subject-matter of the amended claims 1 and 22 have been explained in detail in the response of the Applicant to the Office Action of May 11, 2010. These reasons are considered to hold for the subject matters of the amended claims 1 and 22 as well.

A person having ordinary skill in the art moreover could not obtain any useful hint which would lead that person towards combining a hollow shaft having the ability to rotate with the transmission of torque from the remotely-operated drive to this same hollow shaft. Through this combination of features, along with the capability of the hollow shaft to axially move, the inventive setting device and parking brake are compact in their dimensions, while the brake cable force can be correctly measured. As it is the hollow shaft which rotates and axially shifts, while the spindle shaft undergoes advancing movement and thereby tensions/releases the brake cable, the force measurement can advantageously be carried out independently of the instantaneous position of the spindle shaft and independently of the overall distance the spindle shaft has traveled.

Amended claims 1 and 22 therefore also fulfill the non-obviousness requirement of 35 USC § 103.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment, including the Office Action's characterizations

of the art, does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment or cancellation of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment or cancellation. Applicant reserves the right to prosecute the rejection claims in further prosecution of this or related applications.

In view of the above amendments and remarks, it is believed that the present application is in condition for allowance. Consideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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